

Notice of Allowability

Application No.

10/813,407

Examiner

Michael Trinh

Applicant(s)

LI ET AL.

Art Unit

2822

AM

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Election filed September 06, 2005 and Interview 9/29/05.
2. ☒ The allowed claim(s) is/are 1-17.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 20050927.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 3/25/05 & 9/6/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 20050927.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


Michael Trinh
Primary Examiner

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DETAILED ACTION

****** This office action is in response to Applicant's Election filed on September 06, 2005.

Elected claims 1-17 are pending. Non-elected claims 18-32, without traverse are withdrawn from further consideration pursuant to 37 CFR 1.142(b). Non-elected claims 18-32 were also canceled by Applicants.

****** The drawings for replacement were received on August 11, 2004.

Drawings Objection

1. The drawing Figures 1B and 4B are objected to because of the following reasons:

****** Figure 1B does not include the reference sign of "150" as mentioned in the specification page 4 (line 3 of paragraph [0012]) for the graph.

****** Figure 4B shows the reference sign "446" for the wafer; whereas, specification pages 49 and 50 (at paragraphs [0119] and [0121]) differently mentioned "436" for the wafer.

****** Figure 4B shows the reference sign "459" for probe beam generated by laser 435; whereas, the specification (at paragraphs [00123] to [00125], [00127], and [0130]) differently mentioned "439" for the probe beam.

Correction of the drawing figures to show the reference signs as mentioned in the specification are respectfully requested. *Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will **not** be held in abeyance.*

Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

2. Authorization for this Examiner's Amendment was given in a telephone interview with Attorney Omkar Suryadevara on September 29, 2005.

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IN THE CLAIMS:

- ** In claim 10, line 1, change “wherein:” to --further comprising:--.
- ** In claim 10, line 2, delete “said determining includes”.
- ** In claim 15, line 3, after “structure;” insert --and--.
- ** In claim 15, line 4-5, delete “; and said analog signal is used during said determining”.

IN THE SPECIFICATION:

- **Page 1, line 3 of paragraph [0001], change “[UNKNOWN]” to --No. 10/812,817--.

Allowable Subject Matter

3. Claims 1-17 are allowed.
4. The following is a statement of reasons for the indication of allowable subject matter:
The references of record including Borden et al (6,885,444), Borden et al (6,911,349), Borden et al (6,906,801), etc., alone or in combination, do not fairly anticipatively disclose each and every aspect of the claimed method of identifying a defective location in a conductive structure formed in a semiconductor wafer, or fairly make a prima facie obvious case of the claimed method, in combination with other processing claimed limitations as recited in base claim 1, the inclusion of applying heat to the conductive structure at an intensity that changes over time; measuring electromagnetic radiation from an area of the conductive structure, as a function of changing intensity of applied heat, the area of a single measurement being sufficiently large to cover a plurality of vias; comparing the single measurement with a plurality of measurements obtained by performing said measuring in other areas while applying heat; and providing an indication about a suspected defect in said area, in response to the comparison.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael M. Trinh whose telephone number is (571) 272-1847. The examiner can normally be reached on M-F: 8:30 Am to 5:00 Pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on (571) 272-1852. The fax phone numbers for the organization where this application proceeding is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

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A handwritten signature in black ink, appearing to read "Michael Trinh".

Michael Trinh
Primary Examiner